

3rd evaluation and results

No Mowing Trial Pitt Town

Introduction

At the conclusion of the second trial stage all plots at the Pitt Town site were let go and not mown or maintained for a 20 week period between 15th January 2007 and 7th June 2007. The purpose of this trial is to observe which varieties would easily get out of control, become invasive and unmanageable if they were not maintained for a period of time. This trial will provide real data on which varieties perform the best under these conditions requiring the least amount of maintenance, attention and could be left for a long period while still having an adequate quality lawn.

General Information and Results

On the 7th June 2007 all plots had been left untouched for 20 weeks and 3 days, this period of time was sufficient enough for the purpose of the trial, so that each individual plot could reach a growing height suitable to measure and average the differences between each variety tested. A and B plots for each variety had 10 random readings taken from each plot to give an overall average for each variety. All plots received moderate, sensible to sufficient irrigation over this period.

Following is Table 1 which shows the measurements collected on the A plots at the Pitt Town site. All measurements are in mm

| Readings | Kikuyu 1A | Kikuyu11A | Kikuyu 15A | Palmetto 2A | Palmetto12A | Palmetto 16A | Sir W 3A | Sir W 7A | Sir W 17A |
|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 1 | 298 | 411 | 499 | 138 | 117 | 88 | 158 | 214 | 156 |
| 2 | 296 | 312 | 498 | 98 | 118 | 110 | 195 | 173 | 188 |
| 3 | 296 | 305 | 512 | 118 | 129 | 145 | 163 | 184 | 210 |
| 4 | 320 | 338 | 522 | 112 | 119 | 140 | 255 | 173 | 200 |
| 5 | 325 | 402 | 433 | 142 | 136 | 110 | 165 | 175 | 145 |
| 6 | 310 | 456 | 445 | 164 | 88 | 109 | 185 | 168 | 168 |
| 7 | 288 | 489 | 460 | 162 | 110 | 113 | 228 | 183 | 178 |
| 8 | 298 | 414 | 553 | 138 | 108 | 99 | 179 | 175 | 205 |
| 9 | 268 | 398 | 449 | 132 | 120 | 108 | 140 | 148 | 209 |
| 10 | 345 | 407 | 481 | 148 | 148 | 125 | 198 | 153 | 134 |
| Average | 304.4 | 393.2 | 485.2 | 135.2 | 119.3 | 114.7 | 186.6 | 174.6 | 179.3 |

| Readings | Smaster 4A | Smaster 8A | Smaster 18A | Greenlees 5A | Greenlees 9A | Greenlees 13A | Empire 6A | Empire 10A | Empire 14A |
|----------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|
| 1 | 173 | 160 | 150 | 270 | 263 | 295 | 108 | 106 | 91 |
| 2 | 188 | 123 | 222 | 284 | 215 | 281 | 108 | 119 | 91 |
| 3 | 158 | 142 | 255 | 216 | 220 | 225 | 111 | 127 | 92 |
| 4 | 178 | 144 | 241 | 160 | 204 | 167 | 124 | 139 | 100 |
| 5 | 188 | 156 | 220 | 162 | 243 | 138 | 134 | 138 | 100 |
| 6 | 185 | 168 | 230 | 181 | 135 | 182 | 117 | 129 | 102 |
| 7 | 167 | 154 | 220 | 195 | 143 | 189 | 119 | 102 | 109 |
| 8 | 183 | 178 | 146 | 238 | 152 | 258 | 123 | 113 | 111 |
| 9 | 194 | 147 | 148 | 247 | 200 | 222 | 119 | 110 | 119 |
| 10 | 184 | 153 | 190 | 238 | 243 | 220 | 93 | 183 | 130 |
| Average | 179.8 | 152.5 | 202.2 | 219.1 | 201.8 | 217.7 | 115.6 | 126.6 | 104.5 |

Following is Table 2 which shows the measurements collected on the B plots at the Pitt Town site. All measurements are in mm.

| Readings | Kikuyu 1B | Kikuyu 11B | Kikuyu 15B | Palmetto 2B | Palmetto 12B | Palmetto 16B | Sir W 3B | Sir W 7B | Sir W 17B |
|----------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|
| 1 | 278 | 655 | 609 | 88 | 119 | 80 | 129 | 166 | 88 |
| 2 | 286 | 648 | 633 | 88 | 168 | 88 | 153 | 137 | 162 |
| 3 | 278 | 465 | 630 | 78 | 144 | 105 | 173 | 157 | 148 |
| 4 | 305 | 636 | 648 | 74 | 128 | 130 | 141 | 173 | 150 |
| 5 | 260 | 564 | 655 | 86 | 90 | 110 | 127 | 195 | 158 |
| 6 | 280 | 558 | 644 | 85 | 80 | 110 | 116 | 160 | 150 |
| 7 | 265 | 493 | 520 | 70 | 110 | 109 | 125 | 132 | 125 |
| 8 | 268 | 412 | 535 | 72 | 108 | 109 | 155 | 148 | 112 |
| 9 | 276 | 541 | 580 | 60 | 120 | 98 | 155 | 155 | 122 |
| 10 | 258 | 500 | 600 | 55 | 148 | 110 | 190 | 139 | 159 |
| Average | 275.4 | 547.2 | 605.4 | 75.6 | 121.5 | 104.9 | 146.4 | 156.2 | 137.4 |

| Readings | Smaster 4B | Smaster 8B | Smaster 18B | Greenlees 5B | Greenlees 9B | Greenlees 13B | Empire 6B | Empire 10B | Empire 14B |
|----------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|------------|--------------|
| 1 | 123 | 128 | 190 | 270 | 210 | 248 | 114 | 109 | 118 |
| 2 | 185 | 159 | 150 | 284 | 208 | 229 | 97 | 127 | 137 |
| 3 | 186 | 144 | 110 | 216 | 127 | 147 | 124 | 137 | 112 |
| 4 | 257 | 128 | 113 | 160 | 116 | 186 | 114 | 133 | 123 |
| 5 | 204 | 169 | 130 | 162 | 149 | 188 | 110 | 116 | 136 |
| 6 | 170 | 186 | 112 | 181 | 169 | 220 | 118 | 110 | 99 |
| 7 | 159 | 188 | 146 | 195 | 174 | 227 | 121 | 117 | 88 |
| 8 | 170 | 202 | 140 | 238 | 148 | 223 | 117 | 125 | 99 |
| 9 | 177 | 112 | 138 | 247 | 149 | 199 | 128 | 137 | 101 |
| 10 | 94 | 159 | 107 | 238 | 208 | 198 | 131 | 139 | 111 |
| Average | 139.6 | 157.5 | 133.6 | 219.1 | 165.8 | 206.5 | 117.4 | 125 | 112.4 |

Table 3 includes the averages of the 3 individual A and B plots for each variety. It also includes an average of the A and B plots combined. All measurements are in mm.

| Varieties | Fert A Plots | Unfert B Plots | Average of A+B combined |
|------------|--------------|----------------|--------------------------------|
| Kikuyu | 394.3 | 476 | 435.15 |
| Palmetto | 123.1 | 100.6 | 111.85 |
| Sir Walter | 180.2 | 146.6 | 163.4 |
| Smaster | 178.2 | 143.6 | 160.9 |
| Greenlees | 212.9 | 197.1 | 205 |
| Empire | 115.6 | 118.3 | 116.95 |

During observations and recording of measurements on this trial we found that the Kikuyu in the Fertilised A plots was actually on average a lower height than the non fertilized B plots. This is because the fertilized plots grew a lot quicker and became softer causing the leaf to fall over and not be upright, whereas the leaf on the non fertilised B plots were not soft but were upright so they stayed at a taller height. It was also noted that Empire had a slightly lower growth rate in the fertilized A plots compared with the non fertilized B plots. This result is most likely due to the slow release fertiliser being applied over 6 months prior to the trial beginning. As a result the effect of the fertilizer had most likely worn off quicker on the Empire and had no significant difference between the non fertilised plots and the fertilized plots. Other varieties such as the Greenlees, Shademaster, Sir Walter and Palmetto showed that the average growth was taller when fertilised with a slow release fertilizer prior to performing no mowing.

As the results show Kikuyu by a long way was the fastest growing variety with the tallest growth, followed by Greenlees Couch and then Sir Walter and Shademaster. Empire and Palmetto were significantly the best 2 varieties in this situation where no mowing was performed.

When observing the plots we did find that the Empire had the most even growth with higher uniformity followed closely by Palmetto. Compared to the other varieties in the trial Kikuyu was the most rampant and out of control by a significant amount.

Conclusion

In conclusion it is clear that Palmetto and Empire are the 2 best turf varieties in this trial for low maintenance and having significantly less growth when left for periods of time without any mowing or maintenance.

The results show us that if you have periods of no mowing for short or longer periods either with a home lawn or lawn for commercial use it would be more sensible to use either Empire or Palmetto turf varieties. For home lawns Empire or Palmetto would be the obvious choice. If you are going away on holidays or simply you can not mow your lawn for whatever reason Empire and Palmetto will grow to the shortest heights with the best quality, making them both more manageable when you return to mowing again. The results show that generally it is better not to fertilise your lawn prior to going away when no mowing can be performed due to the higher growth rates.

For commercial use of turf for roadsides, factories, large amenity areas, large banks and hard to mow areas the best choice would be Empire Turf. Empire keeps the most even, uniform growth and will only grow to an average height of 10-12cm when not mown for periods of time. Empire is great for commercial applications where erosion or damage may occur as it has very good erosion control capabilities. (Please see plant and turf erosion control paper www.ozbreed.com.au/Erosion_Research.html). Empire also has very good drought survivability and is ideal for these low maintenance commercial applications where maintenance is very low.

If other varieties were to be used for residential or commercial applications in this way namely Kikuyu, Greenlees, Sir Walter and Shademaster they would grow too tall, require too much maintenance and become somewhat invasive and a lot harder to manage. Empire and Palmetto can be left a lot longer without any maintenance or mowing without becoming too tall, untidy and invasive into other unwanted areas.